

CLAIMS

1. A membrane for biological applications, comprising an elastic material and at least one passage which extends through the elastic material, wherein when said passage is expanded, which occurs when a cannula is inserted in the passage, said elastic material elastically presses against said cannula and surrounds the cannula in a seal, wherein the membrane can be compressed perpendicularly relative to the passage.
2. The membrane as set forth in claim 1, wherein at least one hollow space is formed in said elastic material of the membrane and the elastic material can yield into said at least one hollow space when compressed perpendicularly relative to the passage.
3. The membrane as set forth in claim 2, wherein the at least one hollow space is next to the passage.
4. The membrane as set forth in claim 3, wherein the at least one hollow space extends through the elastic material next to the passage.
5. The membrane as set forth in claim 2, wherein a number of hollow spaces are formed in the elastic material of the membrane and are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage.
6. The membrane as set forth in claim 5, wherein the hollow spaces are not rotationally symmetrical with respect to a longitudinal axis of the membrane which is generally perpendicular to said cross-sectional plane of the passage.
7. A membrane-cannula combination for biological applications, said combination comprising:
  - a) a cannula for conveying a fluid;
  - b) a casing; and
  - c) a membrane accommodated by said casing and comprising an elastic membrane material through which a passage is formed, into which said cannula can be inserted; wherein

- d) said passage is expanded by inserting the cannula and said membrane material presses against the casing, generally perpendicularly to the passage, and elastically presses against the inserted cannula such that the membrane material surrounds the cannula in a seal.
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- 8. A membrane for biological applications, comprising at least one passage which extends through an elastic material of said membrane, wherein when said passage is expanded, which occurs when a cannula is inserted into the passage, said material elastically presses against said cannula and surrounds the cannula in a seal, wherein the passage exhibits a cross-sectional area comprising a long main axis and a short main axis generally perpendicular to said long main axis.
  - 9. The membrane as set forth in claim 8, wherein said cross-sectional area is oval.
  - 10. The membrane as set forth in claim 8, wherein the cross-section area exhibits a circumference with a constant curvature.
  - 11. The membrane as set forth in claim 8, wherein at least one hollow space is formed in said elastic material of the membrane and the elastic material can yield into said at least one hollow space when compressed perpendicularly relative to the passage.
  - 12. The membrane as set forth in claim 11, wherein the at least one hollow space is next to the passage.
  - 13. The membrane as set forth in claim 12, wherein the at least one hollow space extends through the elastic material next to the passage.
  - 14. The membrane as set forth in claim 8, wherein a number of hollow spaces are formed in the elastic material of the membrane and are generally axially symmetrical with respect to an axis of symmetry which extends in a cross-sectional plane of the passage.
  - 15. The membrane as set forth in claim 14, wherein the hollow spaces are not rotationally symmetrical with respect to a longitudinal axis of the membrane, perpendicular to said cross-sectional plane of the passage.

16. A membrane in accordance with claim 14, wherein the hollow spaces are generally axially symmetrical on both sides of the long main axis.
17. A membrane-cannula combination for biological applications, said combination comprising:
  - a) a cannula for conveying a fluid;
  - b) a casing;
  - c) and a membrane accommodated by said casing and comprising an elastic membrane material through which a passage is formed, into which said cannula can be inserted;
  - d) wherein said passage is expanded by inserting the cannula and said membrane material presses against the casing, generally perpendicularly relative to the passage, and elastically presses against the inserted cannula such that the membrane material surrounds the cannula in a seal; wherein
  - e) the passage and the cannula exhibit different cross-sectional shapes relative to each other before the cannula is inserted and one of the passage or the cannula has an elongated cross-sectional area.
18. A connecting device for connecting a fluid guiding means for a biological or biologically active fluid to a catheter, said connecting device comprising:
  - a) a casing comprising an inlet for said catheter;
  - b) a cannula which forms a front end of said fluid guiding means;
  - c) and an elastic membrane comprising a passage into which said cannula can be inserted to establish the connection;
  - d) wherein said membrane is accommodated by said casing in such a way that a sealed connection is established between the catheter and the cannula by the membrane; wherein
  - e) when the cannula is inserted in the passage, the passage is expanded, and said elastic membrane elastically presses against said cannula and surrounds the

cannula in a seal, wherein the membrane can be compressed perpendicularly relative to the passage.

19. The connecting device as set forth in claim 18, wherein said connecting device forms a body access device, the catheter can be implanted, and the casing is a port body which can be percutaneously or subcutaneously implanted.
20. The connecting device as set forth in claim 18, wherein a casing inlet for the catheter is formed in a recess of a casing surface and said recess exhibits a sufficient size to accommodate a curved section of the catheter.
21. The connecting device as set forth in claim 20, wherein the recess gradually tapers towards the inlet.
22. A connecting device for connecting a fluid guiding means for a biological or biologically active fluid to a catheter, said connecting device comprising:
  - f) a casing comprising an inlet for said catheter;
  - g) a cannula which forms a front end of said fluid guiding means; and
  - h) an elastic membrane comprising a passage into which said cannula can be inserted, to establish the connection; wherein
  - i) said membrane is accommodated by said casing in such a way that a sealed connection is established between the catheter and the cannula by the membrane, and wherein the passage exhibits a cross-sectional area comprising a long main axis and a short main axis generally perpendicular to said long main axis.
23. The connecting device as set forth in claim 22, wherein said connecting device forms a body access device, the catheter can be implanted, and the casing is a port body which can be percutaneously or subcutaneously implanted.
24. The connecting device as set forth in claim 22, wherein the casing inlet for the catheter is formed in a recess of a casing surface and said recess exhibits a sufficient size to accommodate a curved section of the catheter.

25. The connecting device as set forth in claim 24, wherein the recess gradually tapers towards the inlet.
26. A membrane having at least a portion that is elastic, a passage associated with the portion, wherein when a cannula is inserted in the passage, the passage is expanded and the portion sealingly presses against the cannula.
27. The membrane according to claim 26, wherein the portion can be compressed at an angle relative to the passage.
28. The membrane according to claim 27, wherein the passage exhibits a cross-sectional area having a long main axis and a short main axis perpendicular to the long main axis.
29. The membrane according to claim 27, further comprising a cannula for biological and medical uses.
30. The membrane according to claim 27, further comprising a connecting device for connecting a fluid guide and a catheter.
31. The membrane according to claim 28, further comprising a cannula for biological and medical uses.
32. The membrane according to claim 28, further comprising a connecting device for connecting a fluid guide and a catheter.